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ABSTRACT

This report contains information on federal funding of the research and development (R&D) components of agency programs as proposed by the administration for Fiscal Year (FY) 1998. Research and development data contained in this report are classified into the same federal budget function categories used in the Budget of the United States Government, Fiscal Year 1998. Detailed data are included on preliminary estimates for federal funding of R&D in FY 1997 that reflect all past congressional actions. This report also includes detailed data (by subfunction) on actual budget authorizations of R&D by federal agencies in FY 1996 and aggregate data (by broad function) on actual R&D budget authorizations in FY 1995 and earlier years. (DDR)

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Federal R&D Funding by Budget Function

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Fiscal Years 1996-98

An SRS Special Report

Division of Science Resources Studies
Directorate for Social, Behavioral and Economic Sciences

National Science Foundation

NSF 98-301

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Federal R&D Funding by Budget Function

Fiscal Years 1996-98

An SRS Special Report

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Division of Science Resources Studies
Directorate for Social, Behavioral and Economic Sciences

National Science Foundation

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NOTES TO THE READER

This annual report contains information on Federal funding of the **research and development** (R&D) components of agency **programs, as** proposed by the administration for fiscal year (FY) 1998. R&D data in this report are classified into the same Federal budget function categories used in the *Budget of the United States Government, Fiscal Year 1998*. Proposed FY 1998 funding levels are for budget authority (defined below), which is the basis for initial congressional action. In future *Budget Function* reports, these data will be revised to reflect congressional appropriation and actual program funding decisions. Detailed data are included on *preliminary* estimates for Federal funding of R&D in FY 1997 that reflect all past congressional actions, but may be revised since, at the time of report preparation; FY 1997 had not yet been completed. This report also includes detailed data (by subfunction) on actual budget authorizations of R&D by Federal agencies in FY 1996, and aggregate data (by broad function) on actual R&D budget authorizations in FY 1995 and earlier years.

Although the Federal budget discussed in this report has been available for several months, it is still useful to look at those numbers in a concise format. Publication of this report was delayed to allow a few agencies to resolve certain detailed budget items presented in the text and tables. National Science Foundation (NSF) viewed this information as a critical part of the report.

REPORT ORGANIZATION

These notes introduce the basic budget terms and concepts used in this report. The rest of the report is divided into three sections:

Research and Development in the 1998 Budget: An Overview provides an overview of Federal funding of R&D within the context of requested total Federal budget authority. This section consists of five tables. Tables 1, 2, 4, and 5 provide an overview of Federal R&D funding within the context of requested total Federal budget authority. Table 3 details Federal R&D funding for national defense and civilian programs in current and constant 1992 dollars for FYs 1955-98.

R&D by Specific Budget Function summarizes activities conducted within each budget function. Programs within the five functional categories that account for 90 percent of the R&D sponsored by the Federal Government are discussed briefly; data on R&D activities within the remaining functional categories are presented in tabular form only. This section consists of 19 tables (tables 6 through 24), which provide a summary of R&D activities conducted within each Federal budget function.

Historical Tables presents two historical data series: (1) Federal R&D funding by function for fiscal years 1955-98 (tables 25a through 25g) and (2) Federal funding of basic research for fiscal years 1978-98 (tables 26a through 26c).

DEFINITIONS

Research and Development

As used in this report, R&D refers to research—both basic and applied—and development activities in the sciences and engineering.

Research is a systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research is classified as either basic or applied according to the objective of the sponsoring agency.

- In **basic research** the objective of the sponsoring agency is to gain fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.

- In **applied research** the objective of the sponsoring agency is to gain knowledge or understanding necessary for determining means by which a recognized and specific need may be met.

Development is the systematic use of the knowledge or understanding gained from research directed toward the production of useful materials, devices, systems, or methods, including design, development,

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and improvement of prototypes and new processes. It excludes quality control, routine product testing, and production.

Funds for conducting R&D include those for personnel, program supervision, and administrative support directly associated with R&D activities. Expendable or movable equipment needed to conduct R&D—e.g., microscopes or spectrometers—is also included.

This report does not include data on R&D plant funds—i.e., funds for R&D facilities such as reactors, wind tunnels, or particle accelerators or for the construction, repair, or alteration of such facilities. Also excluded are all non-R&D activities performed within budget functions that conduct R&D and all functions in which no R&D is conducted.

Budget Authority, Obligations, and Outlays

The Federal R&D funding data presented here are, with a few noted exceptions, provided in budget authority. Budget authority is used because it is the initial budget parameter for congressional action on the President's proposed budget. Budget authority imposes a ceiling on obligations and outlays; obligations and outlays flow from budget authority.

- **Budget authority** is the primary source of legal authorization to enter into obligations that will result in outlays. Budget authority is most commonly granted in the form of appropriations by the congressional committees assigned to determine the budget for each function.

- **Obligations** represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated and when the future payment of money is required.

- **Outlays** represent the amounts for checks issued and cash payments made during a given period, regardless of when the funds were appropriated or obligated.

Budget Functions

All activities covered by the Federal budget, including R&D, are classified into 20 broad functional categories. The Federal budget total comprises funding for these 20 functions. An agency's activities are not necessarily included in only one function. Instead, the programs of one agency typically are distributed across functions, and each function often includes programs from multiple agencies. No overlap occurs between functions or between the various agency programs within those functions. In a few cases components of a major national effort are funded through multiple functions, such as the Human Genome mapping effort (health and energy).

Notably, each specific R&D activity is assigned to only one function area, consistent with the official codes used in budget documents, even though the R&D activity may address several functional concerns. For example, except for those of the Army Corps of Engineers, all R&D activities sponsored by the Department of Defense (DoD) are classified as defense, even though some activities have secondary objectives such as space or health. Moreover, only R&D funded by the Department of Health and Human Services and the Department of Labor is classified in the health function category. Yet some R&D funding, from at least three agencies—DoD and the Departments of Energy and Veterans Affairs—has a major health component.

The functional categories and definitions used in this report are the same as those used in the Federal budget, with one exception. R&D activities categorized as general science, space, and technology (function 250) are reported separately here. Subfunction 251 contains R&D activities for general science and basic research, and subfunction 252 contains R&D activities for space research and technology. Not all federally sponsored basic research is categorized in function 251, however; some basic research is included in the remaining 19 functional categories.

Five Federal budget functions—Medicare (function 570), social security (function 650), net interest (function 900), allowances (function 920), and undistributed offsetting receipts (function 950)—have no R&D components. Consequently, they are not discussed in this report, except where R&D is described as a proportion of total Federal budget authority.

The Agency/Function Crosswalk on page 5 lists—by name and function code—the 16 individual R&D functions funded by agencies.

Data Sources

Within the overall Federal Budget there is no separately identified R&D budget as such; nor are most appropriations for R&D so labeled except in the case of certain program areas, such as in defense, energy, health, and environment. Consequently, most funds for R&D are not line items in an agency's budget submission but are included within general program funding. To determine funding for Federal R&D, the Office of Management and Budget (OMB) requires agencies whose annual R&D funding is greater than $10 million to submit data on their R&D programs as part of their annual budget submissions. Specifically, the agencies provide data—reported, in accordance with OMB Circular A-11, Max Schedule C, "Research and Development Activities"—on funding levels for basic research, applied research, development, R&D facilities, and R&D support to universities and colleges.

The data in this report represent agencies' best estimates of actual and proposed Federal funding for R&D collected during the period February 6 through April 30, 1997. These data are based primarily on information provided to OMB by 22 agencies and account for more than 99 percent of all federally sponsored R&D activities. Also incorporated in this report is R&D information that became available from the individual agencies after the administration's budget was prepared and reported in the *Budget of the United States Government.* Such information consists of agency budget justification documents submitted to Congress and supplemental, program-specific information obtained from agency budget and program staff through mid-May 1997. Therefore, budget numbers for individual activities, programs, or agencies may differ slightly from those published in the President's budget or agency budget documents.

AGENCY FUNCTION CROSSWALK

AGENCIES	National Defense (050)	Health (550)	Science, Space, and Technology (250)	General Science (251)	Energy	Transportation (400)	Physical Resources and Environment	Agriculture (350)	Financial Transactions	Veterans Benefits and Services (700)	International Affairs	Commerce and Housing Credit (370)	Community and Regional Development	Administration of Justice (750)	Income Security	General Government (800)
Agency for International Development											●					
Corps of Engineers (Civil)							●									
Dept. of Agriculture							●	●								
Dept. of Commerce							●					●	●			
Dept. of Defense (Military)	●															
Dept. of Education									●							
Dept. of Energy	●			●	●											
Dept. of Health and Human Services		●							●						●	
Dept. of Housing and Urban Dev.													●			
Dept. of Justice														●		
Dept. of Labor		●							●						●	
Dept. of the Interior							●									
Dept. of the Treasury														●		●
Dept. of Transportation						●										
Dept. of Veterans Affairs										●						
Environmental Protection Agency							●									
National Aeronautics and Space Adm.			●			●										
National Science Foundation				●												
Nuclear Regulatory Commission					●											
Smithsonian Institution									●							
Social Security Administration															●	
Tennessee Valley Authority					●								●			

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Max Schedule C, "Research and Development Activities"; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

RESEARCH AND DEVELOPMENT IN THE 1998 BUDGET: AN OVERVIEW

INTRODUCTION

This report presents information on Federal proposed fiscal year (FY) 1998 budget authority for the research and development (R&D) components of agency programs. The data were submitted by Federal agencies to the Office of Management and Budget in early 1997. This report documents historical data not affected by current legislation and therefore can be used for tracking funding trends. The report also provides detailed data on Federal R&D authorizations that are not readily available from other sources.

TOTAL R&D

In the first half of 1997, the administration proposed total budget authority of $72 billion for FY 1998 for all Federal R&D programs, an increase of 1 percent from the estimated 1997 R&D total of $71 billion (table 1). After adjusting for expected inflation, proposed R&D budget authority will decrease 2 percent. Budget authority for R&D grew 3 percent between 1996 and 1997 (an increase of 0.2 percent in constant dollars).

Table 1. Federal R&D budget authority, by budget function, Fiscal years 1996-98

1998 rank	Budget function	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1996-97	Percentage change 1997-98
		[In millions of dollars]				
	Total	69,049	70,988	71,602	2.8	0.9
1	National defense	37,801	39,030	38,726	3.2	-0.8
2	Health	11,867	12,693	12,998	7.0	2.4
3	Space research and technology	7,844	7,795	8,004	-0.6	2.7
4	General science	2,846	2,962	3,086	4.1	4.2
5	Energy	2,521	2,259	2,229	-10.4	-1.3
6	Transportation	1,795	1,827	1,939	1.8	6.2
7	Natural resources and environment	1,802	1,842	1,902	2.2	3.2
8	Agriculture	1,176	1,185	1,196	0.8	0.9
9	Commerce and housing credit	432	435	498	0.8	14.4
10	Education, training, employment, and social services	331	370	411	11.8	11.1
11	International affairs	252	190	246	-24.6	29.5
12	Veterans benefits and services	259	267	239	3.1	-10.5
13	Administration of justice	56	67	70	19.6	4.5
14	Community & regional development	50	54	46	8.0	-14.8
15	Income security	16	10	10	-37.5	0.0
16	General government	2	2	2	0.0	0.0

1/ Adjusted to reflect rescissions and supplementals enacted in Public Law 105-18.

KEY: NA = Not applicable

NOTES: Because of rounding, components may not add to the totals shown. Percentage change is derived from unrounded data.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Among individual functions, the largest 1998 R&D decrease ($0.3 billion) is slated for defense (budget function code 050), which includes military programs of the Department of Defense and the atomic energy defense activities of the Department of Energy (DOE).

Proposed defense-related R&D funding is $38.7 billion in 1998, a 1-percent decrease from the preliminary 1997 level. This proposed decrease reverses the rise of 3 percent in budget authority for defense-related R&D between 1996 and 1997. However, R&D funding within the national defense function has continued to decrease in real terms since 1993 (with the exception of a 0.7-percent increase between FYs 1996-97). The proposed real decrease in defense-related R&D budget authority is offset by an increase in proposed funding of civilian R&D in 1998. Nondefense R&D funding is anticipated to grow by about 3 percent to $32.9 billion in 1998 (0.1 percent in constant dollars). Civilian-related activities represent 46 percent of Federal funding for the conduct of R&D. The proportion of R&D funds proposed for defense-related activities has declined from 55.0 percent in 1997 to 54.1 percent in 1998.

The five largest budget functions with respect to R&D expenditures—national defense, health, space research and technology, general science, and energy—together account for 91 percent of all proposed Federal R&D funding. Health, space, and general science functions are proposed to receive increased funding for R&D in 1998. Highlights of proposed R&D funding by function in the 1998 budget follow.

- National defense R&D funding (function 050) is proposed to drop by $0.3 billion or 1 percent below 1997 levels. Army would experience major decreases in funding, losing 8 percent (a drop of $0.4 billion) of its research, development, test, and evaluation (RDT&E) funds. Navy RDT&E would decline 3 percent, from $7.8 billion in FY 1997 to $7.6 billion in FY 1998. Among the defense agencies, the Ballistic Missile Defense Organization (BMDO) funding is proposed to decline 23.5 percent between FYs 1997-98. However, the Defense Advanced Research Projects Agency (DARPA) expects a 3-percent increase. Only one of DOE's defense-related R&D programs will gain funding over 1997 levels—nuclear safeguards and security, up 10 percent. Although proposed funding for DOE's stockpile management is $21 million in FY 1998, this amount reflects transferring of some nuclear materials R&D costs from DOE's stockpile stewardship program. All of DOE's other defense-related R&D programs are expected to get less or nearly the same funding as in FY 1997.

- The administration proposes a 2-percent increase ($0.3 billion) in health-related R&D (function 550) to $13 billion in 1998. Most of this proposed growth is for the basic and applied biomedical and behavioral research programs of the National Institutes of Health (NIH), which will account for 95 percent of all Federal health R&D. R&D programs for all except one component of NIH will receive greater support in FY 1998 than in FY 1997.

  Funding for NIH's Office of the Director is expected to fall 7 percent. Within the Office of the Director, the Women's Health Initiative and other research activities are slated for funding below their 1997 levels, decreasing 4 percent and 12.5 percent, respectively. More than $2 billion is proposed for R&D projects at the National Cancer Institute. Also, $1.5 billion is proposed for R&D on AIDS/HIV within the Office of AIDS Research, and $1.4 billion is slated for R&D programs at the National Heart, Lung, and Blood Institute. The National Institute on Drug Abuse expects to receive a 9-percent increase (up $30 million) over FY 1997. The National Human Genome Research Institute (it became an institute on January 14, 1997) expects an 8.5-percent increase (up $15 million) over FY 1997.

- R&D budget authority for space research and technology activities (subfunction 252) of the National Aeronautics and Space Administration (NASA) is proposed to increase nearly 3 percent over the FY 1997 funding level. It will increase by $0.2 billion to $8 billion. NASA expects to fund its largest program, space station research, at 8 percent over the FY 1997 level. The 32-percent decrease in NASA's life and microgravity sciences account is due to the transfer of space station related research programs to the space station account. The space science program, NASA's second largest R&D account, is proposed to receive $2.3 billion, up 3 percent from 1997. Major

increases are scheduled for R&D activities for the Mission to Planet Earth (MTPE) program, which will receive an increase of $62 million (up 4 percent), to $1.6 billion in 1998. The budget also proposes that NASA receive increases for space transportation technology and for other human space flight programs, increasing $51 million and $25 million, respectively, from FY 1997 levels.

- Research funding for general science (subfunction 251) is proposed to increase by 4 percent, or $0.1 billion in 1998, to $3 billion. Most of these dollars are slated for the National Science Foundation (NSF); the remaining funds are for DOE general science programs. All programs are proposed to gain funding, ranging between 1 percent to 10 percent over FY 1997 levels. NSF expects to increase research funding to computer and information science and engineering by $25 million or 10 percent above FY 1997. Also, NSF proposes to direct $19 million more toward mathematical and physical sciences research (up 3 percent). DOE's research budget is proposed to grow 5 percent with increases in high energy physics programs (up 6 percent over the FY 1997 level) and nuclear physics activities (up 3 percent).

- A 1-percent decrease (down $30 million) is proposed for energy R&D (function 270) to $2.2 billion in 1998. Energy R&D will comprise 3 percent of total Federal R&D budget authority. The decrease in energy funding is due largely to less support for the fossil energy programs, specifically for clean coal technology. DOE expects to cancel $286 million in unspent, previously appropriated funds for its clean coal technology program under the its fossil energy account. However, the increase in funding for DOE's energy supply programs is attributable to greater support for the solar and renewable energy account, an increase of $76 million, and energy conservation programs, an increase of $63 million. The Tennessee Valley Authority is expected to get $30 million more than its FY 1997 funding level, a 73-percent increase. The Nuclear Regulatory Commission expects to receive $3 million less than it did in FY 1997, down 5 percent.

- Transportation R&D funding (function 400) is proposed to increase by more than 3 percent to $1.7 billion. Three-fourths of the increase (up $67 million from 1997) is slated for air transportation research mostly by NASA for aeronautical research and technology. Funding for ground transportation, however, also is proposed to increase significantly (up $45 million) and will account for 21 percent of the total transportation R&D.

- Natural resources and the environment R&D funding (function 300) is proposed to increase by 3 percent to $2 billion in FY 1998. Within this functional category, the largest gain (an increase of $44 million, up 9 percent) is proposed for the Environmental Protection Agency's (EPA's) science and technology efforts. (This account was created in FY 1996 to consolidate most of EPA's R&D activity.) This EPA account comprises nearly all of the agency's funding for pollution control and abatement, as well as R&D transferred from EPA's Superfund account.

  Moderate decreases (from $533 million in FY 1997 to $525 million in FY 1998) are planned for the National Oceanic and Atmospheric Administration's (NOAA's) natural resources initiatives, which include NOAA's oceanic and atmospheric research programs and initiatives.

- Funding for agricultural R&D (subfunction 352) is proposed to increase in 1998 by 1 percent to $1.2 billion, and would account for under 2 percent of the total Federal R&D budget authority. Over half of the Department of Agriculture's (USDA's) R&D funding is for the Agricultural Research Service (ARS), an intramural research agency whose primary responsibility includes providing initiative and leadership in agricultural research. Several initiatives, including the research on plant sciences, commodity conversion and delivery, and animal sciences, are funded by ARS. The ARS has 103 research laboratories throughout the United States and abroad. Another USDA program, the National Research Initiative (NRI), is expected to increase 38 percent to $130 million in FY 1998. NRI programs support research on integrated pest management, biological control of pests and diseases, human nutrition, plant genome, water quality, food safety, sustainable agriculture, and agricultural systems.

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- The remaining eight functions each have less than $0.5 billion in proposed 1998 R&D budget authority. However, overall R&D for these functions will increase by more than 8 percent ($118 million) to $1.5 billion. The main areas of this growth are in commerce and housing credit (up $63 million); international affairs (up $56 million); and education, training, employment, and social services (up $41 million).

  - R&D for commerce and housing credit (function 370) will increase by 14 percent ($63 million) to nearly $0.5 billion. This total reflects increased support for the Advanced Technology Program (ATP) funded at the National Institute of Standards and Technology (NIST). The ATP funds precompetitive R&D on commercial technologies on a cost-shared basis through a competitive process. Funding for research and general education programs (subfunctions 501-3) of the Department of Education and the Smithsonian Institution will increase by 12 percent ($29 million) to $278 million.

  - The administration proposes to increase funds for international affairs (function 150) by 29.5 percent, up $56 million from the FY 1997 level. This increase is due mainly to additional funding of the global programs in the Agency for International Development.

  - Funding for administration of justice (function 750) of the Departments of Justice and Treasury will increase by 4.5 percent to $70 million in FY 1998.

  - A 10.5–percent decrease (to $239 million) is slated for veterans benefits and services (function 700), due to decreased funding of the medical and prosthetic research programs in the Department of Veterans Affairs. R&D funding is also expected to drop 15 percent (to $46 million) in community and regional development (function 450). R&D funding will stay at FY 1997 levels for income security (function 600) and for general government (function 800), $10 million and $2 million, respectively.

Distribution of Total R&D Budget Authority Among Functions

The five largest R&D functions in 1998—defense, health, space research, general science, and energy—account for 91 percent of all proposed Federal R&D budget authority. Transportation, natural resources and the environment, agriculture, and commerce and housing credit each account for between 1 and 3 percent of Federal funding of R&D. The remaining seven functions each account for less than 1 percent of the total 1998 proposed R&D budget authority (table 2).

During the early and mid-1980s, practically all growth in Federal R&D support was defense-related (chart 1). Since 1986, however, defense R&D has dropped significantly from its peak 69-percent share of the Federal total to the proposed 54-percent share for 1998 (table 3). Despite this decline, defense is proposed to receive more than three times the budget authority for R&D than the next largest function, health.

Proportions of seven functions to the total R&D budget authority would be larger in 1998 than in 1997—health; space research; general science; transportation; natural resources and environment; commerce and housing credit; and education, training, employment, and social services. Proportions for agriculture; international affairs; community and regional development; administration of justice; income security; and general government will stay the same as in 1997. Based on the administration's budget proposal, proportions of three functions would drop in FY 1998—defense, energy, and veterans benefits and services.

Basic Research

The administration proposes to increase budget authority for basic research by 3 percent in 1998 to $15 billion (table 4). When adjusted for expected inflation, this would be about a 0.2-percent increase from the estimated 1997 level. The total dollar amount for basic research, as well as the basic research share of total R&D budget authority, has slowly increased from 15 percent in 1986 to the proposed 21 percent in 1998 (chart 2).

Table 2. Distribution of total R&D budget authority, by function: Fiscal years 1996-98

[In percentages]

1998 rank	Budget function	1996 actual	1997 preliminary 1/	1998 proposed
	Total	100.0	100.0	100.0
1	National defense	54.7	55.0	54.1
2	Health	17.2	17.9	18.2
3	Space research and technology	11.4	11.0	11.2
4	General science	4.1	4.2	4.3
5	Energy	3.7	3.2	3.1
6	Transportation	2.6	2.6	2.7
7	Natural resources and environment	2.6	2.6	2.7
8	Agriculture	1.7	1.7	1.7
9	Commerce and housing credit	0.6	0.6	0.7
10	Education, training, employment, and social services	0.5	0.5	0.6
11	International affairs	0.4	0.3	0.3
12	Veterans benefits and services	0.4	0.4	0.3
13	Administration of justice	0.1	0.1	0.1
14	Community & regional development	0.1	0.1	0.1
15	Income security	(2/)	(2/)	(2/)
16	General government	(2/)	(2/)	(2/)

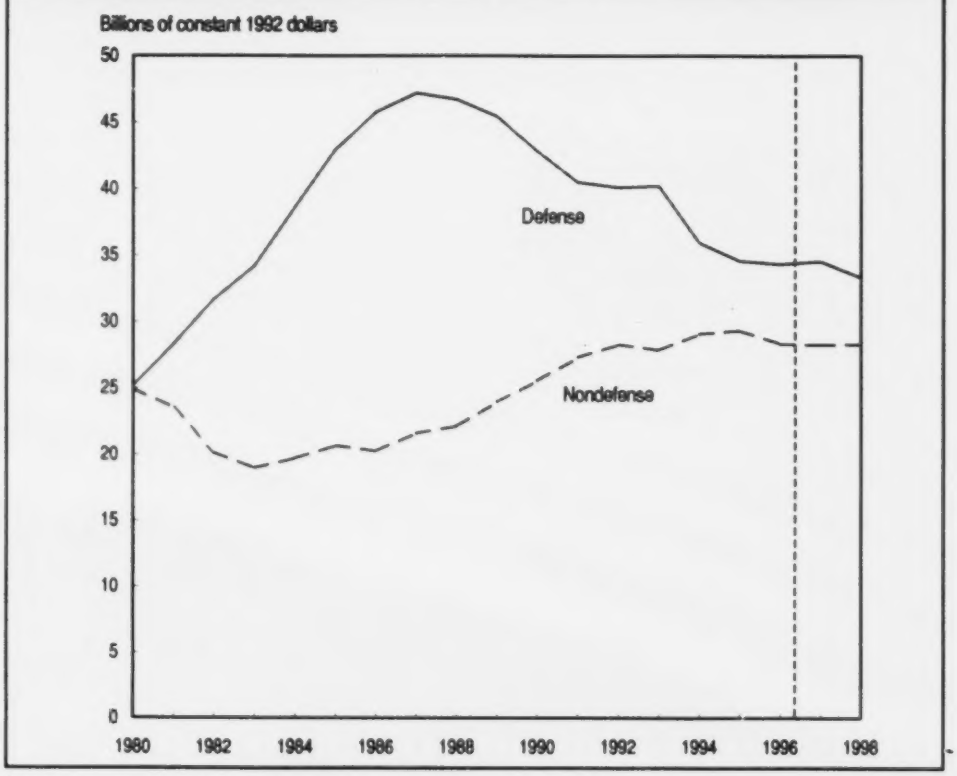
1/ Adjusted to reflect rescissions and supplementals enacted in Public Law 105-18.

2/ Less than one-tenth of one percent.

NOTE: Because of rounding, components may not add to totals.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Chart 1. Federal budget authority for defense and nondefense R&D: Fiscal years 1980-98[1]



[1]1997 numbers are preliminary; 1998 numbers are proposed.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Max Schedule C, "Research and Development Activities;" agency budget justification document; and supplemental data obtained from the agencies' budget offices.

Table 3. Federally funded R&D for national defense and civilian functions: Fiscal years 1955-98

Fiscal year	Current dollars			Constant 1992 dollars 1/			Percent of total	
	Total	National defense	Civilian functions	Total	National defense	Civilian functions	National defense	Civilian functions
	[In millions of dollars]							
1955	2,533	2,151	382	12,551	10,658	1,893	84.9	15.1
1956	2,988	2,535	453	14,299	12,131	2,168	84.8	15.2
1957	3,932	3,327	605	18,120	15,332	2,788	84.6	15.4
1958	4,570	3,801	769	20,552	17,094	3,458	83.2	16.8
1959	6,694	5,556	1,138	29,396	24,399	4,997	83.0	17.0
1960	7,552	6,107	1,445	32,401	26,202	6,200	80.9	19.1
1961	9,059	7,005	2,054	38,268	29,592	8,677	77.3	22.7
1962	10,290	7,238	3,052	43,038	30,273	12,765	70.3	29.7
1963	12,495	7,764	4,731	51,581	32,051	19,530	62.1	37.9
1964	14,225	7,829	6,396	58,017	31,931	26,086	55.0	45.0
1965	14,614	7,342	7,272	58,601	29,441	29,160	50.2	49.8
1966	15,320	7,536	7,784	60,115	29,571	30,544	49.2	50.8
1967	16,529	8,566	7,963	62,773	32,531	30,241	51.8	48.2
1968	15,921	8,275	7,646	58,342	30,323	28,018	52.0	48.0
1969	15,641	8,356	7,285	54,865	29,311	25,554	53.4	46.6
1970	15,339	7,981	7,358	51,113	26,595	24,519	52.0	48.0
1971	15,543	8,110	7,433	49,261	25,703	23,557	52.2	47.8
1972	16,496	8,902	7,594	49,894	26,925	22,969	54.0	46.0
1973	16,800	9,002	7,798	48,696	26,093	22,603	53.6	46.4
1974	17,410	9,016	8,394	47,103	24,393	22,710	51.8	48.2
1975	19,039	9,679	9,360	46,689	23,736	22,954	50.8	49.2
1976	20,780	10,430	10,350	47,522	23,853	23,670	50.2	49.8
1977	23,450	11,864	11,586	49,867	25,229	24,638	50.6	49.4
1978	25,976	12,899	13,077	51,655	25,651	26,005	49.7	50.3
1979	28,208	13,791	14,417	51,778	25,314	26,464	48.9	51.1
1980	29,739	14,946	14,793	50,111	25,185	24,927	50.3	49.7
1981	33,735	18,413	15,322	51,776	28,260	23,516	54.6	45.4
1982	36,115	22,070	14,045	51,773	31,639	20,134	61.1	38.9
1983	38,768	24,936	13,832	53,125	34,170	18,954	64.3	35.7
1984	44,214	29,287	14,927	58,345	38,647	19,698	66.2	33.8

See explanatory notes and SOURCE at end of table.

Table 3. Federally funded R&D for national defense and civilian functions
Fiscal years: 1955-98

Fiscal year	Current dollars			Constant 1992 dollars 1/			Percent of total	
	Total	National defense	Civilian functions	Total	National defense	Civilian functions	National defense	Civilian functions
	[In millions of dollars]							
1985	49,887	33,698	16,189	63,627	42,979	20,648	67.5	32.5
1986	53,249	36,926	16,323	66,057	45,808	20,249	69.3	30.7
1987	57,069	39,152	17,917	68,810	47,207	21,603	68.6	31.4
1988	59,106	40,099	19,007	68,878	46,728	22,149	67.8	32.2
1989	62,115	40,665	21,450	69,452	45,468	23,984	65.5	34.5
1990	63,781	39,925	23,856	68,448	42,847	25,602	62.6	37.4
1991	65,898	39,328	26,570	67,827	40,479	27,348	59.7	40.3
1992	68,398	40,083	28,315	68,398	40,083	28,315	58.6	41.4
1993	69,884	41,249	28,635	68,085	40,187	27,898	59.0	41.0
1994	68,331	37,764	30,566	65,054	35,953	29,101	55.3	44.7
1995	68,791	37,204	31,587	63,931	34,575	29,356	54.1	45.9
1996	69,049	37,801	31,248	62,728	34,341	28,387	54.7	45.3
1997 2/ 3/	70,988	39,030	31,959	62,879	34,571	28,308	55.0	45.0
1998 4/	71,602	38,726	32,876	61,733	33,388	28,345	54.1	45.9

1/ Calculated using fiscal year GDP implicit price deflators with 1992 as the base year.

2/ Adjusted to reflect rescissions and supplementals enacted in Public Law 105-18.

3/ Preliminary

4/ Proposed

NOTES: The national defense function includes Department of Defense's military activities and Department of Energy's atomic energy defense programs. Civilian functions include all other Federally funded R&D activities. Data for 1955-77 are obligations. Data for 1978-96 are actual budget authority. Data for FY 1997 are preliminary estimates of budget authority. Data for FY 1998 are budget authority proposed by the administration.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 4. Budget authority for basic research, by budget function, Fiscal years 1996-98

1998 rank	Budget function	1996 actual	1997 preliminary 1/	1998 proposed	Percent change	
					1996-97	1997-98
		[In millions of dollars]				
	Total	14,442	14,853	15,296	2.8	3.0
5	National defense	1,165	1,133	1,191	-2.7	5.1
1	Health	6,395	6,826	7,015	6.7	2.8
3	Space research and technology	1,685	1,557	1,517	-7.6	-2.6
2	General science	2,662	2,773	2,886	4.2	4.1
4	Energy	1,182	1,219	1,313	3.1	7.8
7	Transportation	456	445	429	-2.4	-3.6
8	Natural resources and environment	147	149	157	0.9	5.9
6	Agriculture	547	545	563	-0.3	3.4
10	Commerce and housing credit	37	39	40	5.4	2.6
9	Education, training, employment, and social services	140	139	146	-0.7	5.0
13	International affairs	2	2	1	0.0	-50.0
12	Veterans benefits and services	13	14	14	7.7	0.0
11	Administration of justice	12	12	24	0.0	100.0
14	Community & regional development	0	0	0	NA	NA
15	Income security	0	0	0	NA	NA
16	General government	0	0	0	NA	NA

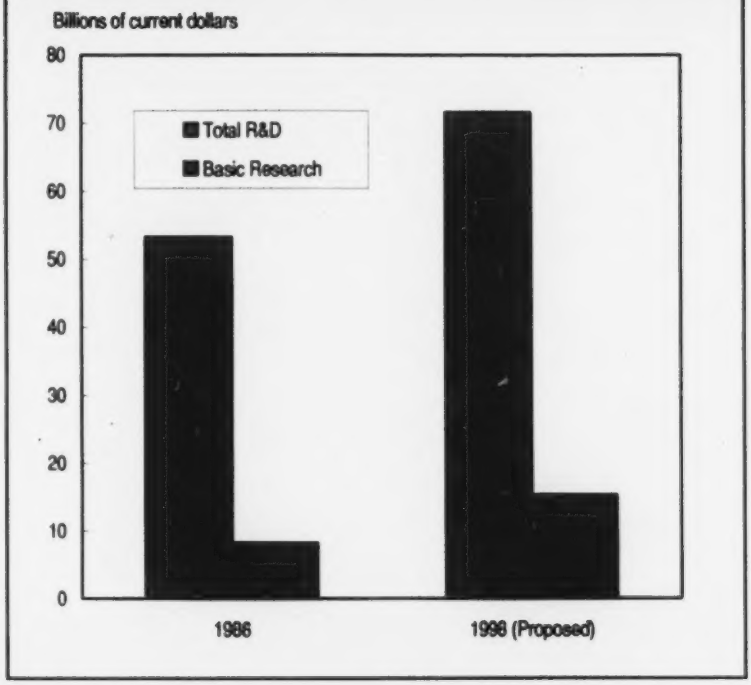
1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

NOTES: Because of rounding, components may not add to the totals shown. Percentage change is derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

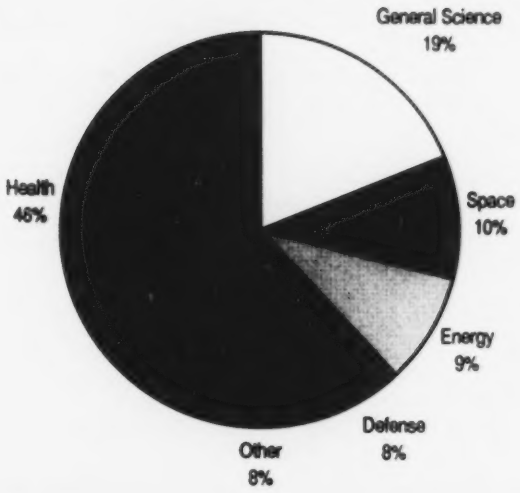
Chart 2. Federal budget authority for basic research compared with total R&D budget authority
Fiscal years 1986 and 1998



SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Max Schedule C, "Research and Development Activities;" agency budget justification document; and supplemental data obtained from the agencies' budget offices.

The largest five R&D functions—defense, health, space research and technology, general science, and energy—are also the largest basic research functions; they account for 91 percent of the basic research total (chart 3). Health ($7 billion) accounts for the largest share (46 percent) of the requested 1998 basic research total, followed by general science ($3 billion) and space research and technology ($1.5 billion). Defense accounts for $1.2 billion—or nearly 8 percent—of the proposed basic research total, but only 3 percent of the defense R&D total is basic research. (The basic research portion of the defense R&D total has remained at about 3 percent for the last seven years.) Of the nondefense R&D total, 43 percent is basic research.

Chart 3. Proposed Federal budget authority for basic research by budget function
Fiscal year 1998
(In percents)



SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Max Schedule C, "Research and Development Activities;" agency budget justification document; and supplemental data obtained from the agencies' budget offices.

R&D's Share of Total Budget Authority

The proportion of R&D funding out of the total funding for functions in which R&D is conducted continues to remain at about 8 percent (table 5). Since FY 1990, the percent has fluctuated from a high of 8.2 percent in FY 1996 to a low of 7.6 percent in FY 1991. For functions that include R&D activities, only three (energy, general science, and space research) are expected to be more than 60 percent of each function's total budget authority. (Energy R&D is greater than total energy budget authority because gross budget authority has been reduced by offsetting receipts, for total net budget authority that is less than R&D budget authority.) The R&D shares in the other functions range from a high of 15 percent for national defense to less than 0.1 percent for income security and general government.

Only four functions (space research, general science, transportation, and commerce and housing credit) will show an increased share of their budget authority directed toward R&D in FY 1998. The R&D share of eight functions is expected to drop.

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Table 5. R&D budget authority as a percent of each function's total budget authority: Fiscal years 1996-98

1998 rank	Budget function	1996 actual	1997 preliminary 1/	1998 proposed
	All functions conducting R&D	8.2	8.0	7.8
4	National defense	14.2	14.9	14.6
6	Health	10.8	9.8	9.7
3	Space research and technology	62.4	62.7	66.0
2	General science	68.7	69.8	71.0
1	Energy 2/	95.2	235.1	117.9
9	Transportation	4.9	4.2	4.4
7	Natural resources and environment	8.3	8.3	8.0
5	Agriculture	12.2	10.4	9.9
8	Commerce and housing credit	5.2	3.4	6.0
11	Education, training, employment, and social services	0.6	0.7	0.6
10	International affairs	1.5	1.1	1.1
12	Veterans benefits and services	0.7	0.7	0.6
14	Administration of justice	0.3	0.3	0.3
13	Community & regional development	0.4	0.5	0.4
16	Income security	(3/)	(3/)	(3/)
15	General government	(3/)	(3/)	(3/)

1/ Adjusted to reflect rescissions and supplementals enacted in Public Law 105-18.
2/ R&D as percentage of total budget authority is greater than 100 percent because gross budget authority has been reduced by offsetting receipts, for total (net) budget authority that is less than R&D budget authority.
3/ Less than one-tenth of 1 percent

NOTE: Total budget authority includes discretionary and mandatory budget authority, less offsets.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; supplemental data obtained from the agencies' budget offices; Office of Management and Budget. *Budget of the United States Government, Fiscal Year 1998,* Washington, DC: February, 1997 (Table 31-1).

R&D BY SPECIFIC BUDGET FUNCTION

NATIONAL DEFENSE

The total R&D budget authority request for national defense (function 050) in 1998 is $38.7 billion, which would be a decrease of $0.3 billion—or 1 percent—from estimated 1997 levels. This function consists of the DOD's research, development, test, and evaluation (RDT&E) programs and the atomic energy defense activities of DOE (table 6). The defense function accounts for 54 percent of the total Federal proposed R&D funding in 1998—16 percentage points less than the 1986 share (chart 4). Selected defense changes proposed for R&D funding in FY 1998 are highlighted below.

- R&D funds for all of DOD's mission areas are proposed to decrease by nearly 1 percent to $36.4 billion and account for 93 percent of 1998 defense R&D budget authority. DOE's defense R&D programs are proposed to drop by 2 percent to $2.4 billion.

- Proposed budget authority for defense basic research is $1.2 billion, close to the FY 1996 level. However, defense accounts for a smaller share of the total basic research total in FY 1998 (7.8 percent of total) than it did in FY 1990 (8.5 percent of total).

- Of the three armed services, only the Air Force will receive an increase in RDT&E funding. The Air Force is slated to increase 4 percent, while the Navy and the Army will drop 3 percent and 8 percent, respectively. Hardest hit are the Navy's programs for operational systems development—down 19 percent or $0.4 billion, the Army's programs for advanced technology development—down 38 percent or $0.3 billion, and the Air Force's programs for management support— down 21 percent or $0.2 billion (table 7).

- R&D programs within DOD's Defense Agencies are proposed to decrease by 2 percent to $9 billion, which reverses the 1997 gain of more than 1 percent over 1996 levels. The Ballistic Missile Defense Organization (BMDO) and the Defense Advanced Research Projects Agency (DARPA) will account for 53 percent of the R&D programs within the Defense Agencies. The budget request for the R&D portion of DARPA will increase 3 percent to $2.2 billion. DARPA serves as the central R&D organization in DOD with a primary responsibility to maintain U.S. technological superiority over potential adversaries. BMDO will show a 23.5-percent drop in funds to $2.6 billion. BMDO funds programs in national missile defenses and in theater missile defenses. The agency also is responsible for the continuing research and development of follow-on technologies that are relevant for long-term ballistic missile defense.

- Among DOE's atomic energy defense activities, the largest reduction is proposed for naval reactors development, whose R&D funding will decrease $43 million to about $580 million in FY 1998. Other reductions are planned for environmental restoration and waste management, down $29 million to about $170 million. Small increases are proposed for R&D related to nuclear safeguards and security—up 10 percent to $23 million.

HEALTH

The administration proposes a 2-percent increase for R&D health programs (function 550). The proposed $13 billion 1998 health total accounts for 39.5 percent of all Federal nondefense R&D. Although the total budget authority has been increasing, the health share has been fairly stable over the last 10 years, maintaining above a third of the total nondefense R&D (chart 5). The Department of Health and Human Services, (HHS) funds all R&D classified for health care services and health research (subfunctions 551 and 552); R&D funding for consumer and occupational health and safety (subfunction 554) is provided by HHS and the Department of Labor's Occupational Safety and Health Administration. R&D funding proposed in the FY 1998 budget for health provides growth for almost all agencies performing R&D health programs (table 8). Funding decreases are slated for the Health Resources and Services Administration (down 64 percent) due largely to decreases in funding for health professions, education, and training. The Food and Drug Administration is expected to be

Table 6. R&D budget authority for national defense (050). Fiscal years 1996-98

Agency	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	37,801	39,030	38,726	-0.8
Department of Defense--military (051)	35,401	36,625	36,371	-0.7
Research, development, test, and evaluation (RDT&E)	34,971	36,154	35,934	-0.6
Department of the Army	4,700	4,908	4,511	-8.1
Department of the Navy	8,442	7,825	7,611	-2.7
Department of the Air Force	12,426	13,873	14,451	4.2
Defense agencies	9,133	9,255	9,070	-2.0
Ballistic Missile Defense Org.	3,045	3,373	2,582	-23.5
Defense Advanced Res. Projects Agcy.	2,269	2,140	2,206	3.1
Other defense agencies	3,819	3,742	4,281	14.4
Developmental test & evaluation.	247	269	268	-0.3
Operational test & evaluation	23	24	23	-2.8
Other military funding 2/	430	471	437	-7.2
Department of Energy--atomic energy defense activities (053)	2,401	2,405	2,354	-2.1
Stockpile Stewardship 3/	1,300	1,363	1,362	-0.1
Naval reactors development	609	619	576	-7.0
Stockpile Management 3/	0	0	21	NA
Environmental restoration and waste management	268	198	169	-14.4
Special Technologies	4	4	4	0.0
Nonproliferation	198	201	200	-0.5
Nuclear safeguards and security	22	21	23	9.9

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

2/ Adjustment to R&D budget to exclude major construction and add appropriate personnel costs in direct support of conduct of R&D, and other appropriations.

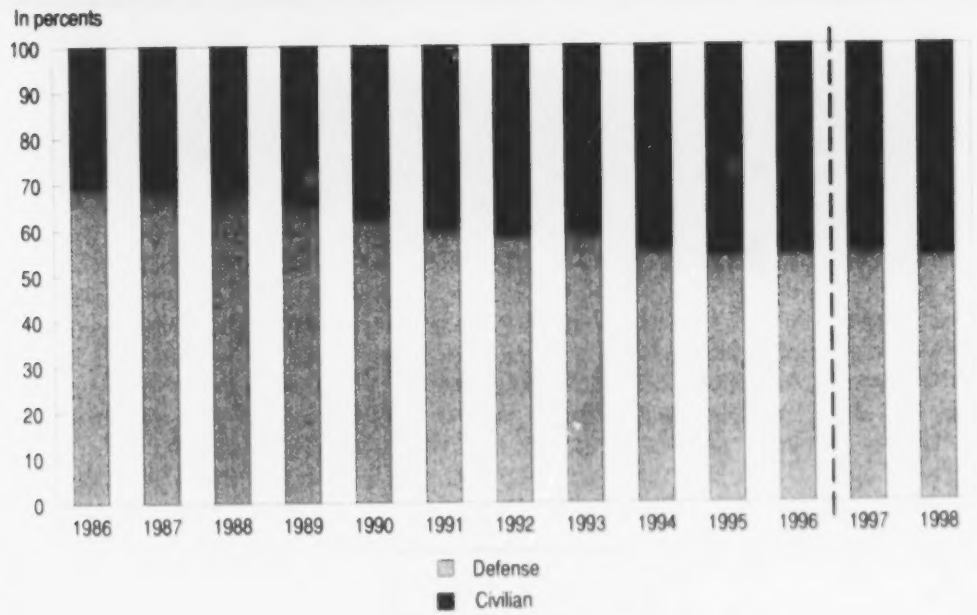
3/ FY 1998 figures reflect transfer of some nuclear materials R&D costs from Stockpile Stewardship to Stockpile Management.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Departments of Defense (DoD) and Energy (DOE) submissions to Office of Management and Budget MAX Schedule C; DoD's "RDT&E Programs (R-1);" *Budget of the United States Government*; and supplemental data obtained from the DOE budget office.

Chart 4. Distribution of federally funded R&D by defense and civilian functions
Fiscal years 1986-98



[1]1997 numbers are preliminary; 1998 numbers are proposed.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Max Schedule C, "Research and Development Activities;" agency budget justification document; and supplemental data obtained from the agencies' budget offices.

Table 7 -- Total obligational authority (TOA) for Department of Defense (DOD) research, development, test, and evaluation (RDT&E) budget: Fiscal years 1996-98

Funding category and agency	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total RDT&E (budget authority)	34,971	36,154	35,934	-0.6
Total RDT&E (TOA)	35,204	36,159	35,934	-0.6
Basic research	1,099	1,075	1,164	8.2
Department of the Army	182	179	199	11.4
Department of the Navy	372	351	382	8.8
Department of the Air Force	216	210	227	8.0
Defense agencies	330	336	356	6.0
Applied research	2,836	2,860	2,814	-1.6
Department of the Army	451	550	463	-15.8
Department of the Navy	538	533	490	-8.0
Department of the Air Force	627	652	593	-9.0
Defense agencies	1,220	1,126	1,268	12.6
Advanced technology development	3,609	3,725	3,414	-8.3
Department of the Army	580	676	418	-38.1
Department of the Navy	472	500	433	-13.3
Department of the Air Force	517	472	402	-14.7
Defense agencies	2,040	2,078	2,160	4.0
Demonstration and validation	5,197	5,603	5,567	-0.6
Department of the Army	454	557	523	-6.0
Department of the Navy	1,713	1,924	2,135	11.0
Department of the Air Force	546	826	1,149	39.2
Defense agencies	2,484	2,297	1,760	-23.4
Engineering and manufacturing development	8,645	8,807	8,549	-2.9
Department of the Army	1,125	1,133	1,107	-2.2
Department of the Navy	2,345	2,137	2,086	-2.4
Department of the Air Force	4,585	4,500	4,444	-1.2
Defense agencies	590	1,037	911	-12.1

See explanatory information and SOURCE at end of table.

Table 7. Total obligational authority (TOA) for Department of Defense (DOD) research, development, test, and evaluation (RDT&E) budget: Fiscal years 1996-98

Funding category and agency	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Management support	3,654	3,144	3,085	-1.9
Department of the Army	1,235	1,069	1,137	6.3
Department of the Navy	685	537	595	10.9
Department of the Air Force	1,047	1,038	821	-20.9
Defense agencies	418	207	241	16.3
Developmental test & evaluation	247	269	268	-0.3
Operational test & evaluation	23	24	23	-2.8
Operational systems development	10,163	10,943	11,341	3.6
Department of the Army	731	746	663	-11.0
Department of the Navy	2,348	1,847	1,489	-19.4
Department of the Air Force	4,974	6,175	6,814	10.4
Defense agencies	2,110	2,176	2,375	9.1
Adjustment for RDT&E budget authority 2/	-233	-5	0	NA

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

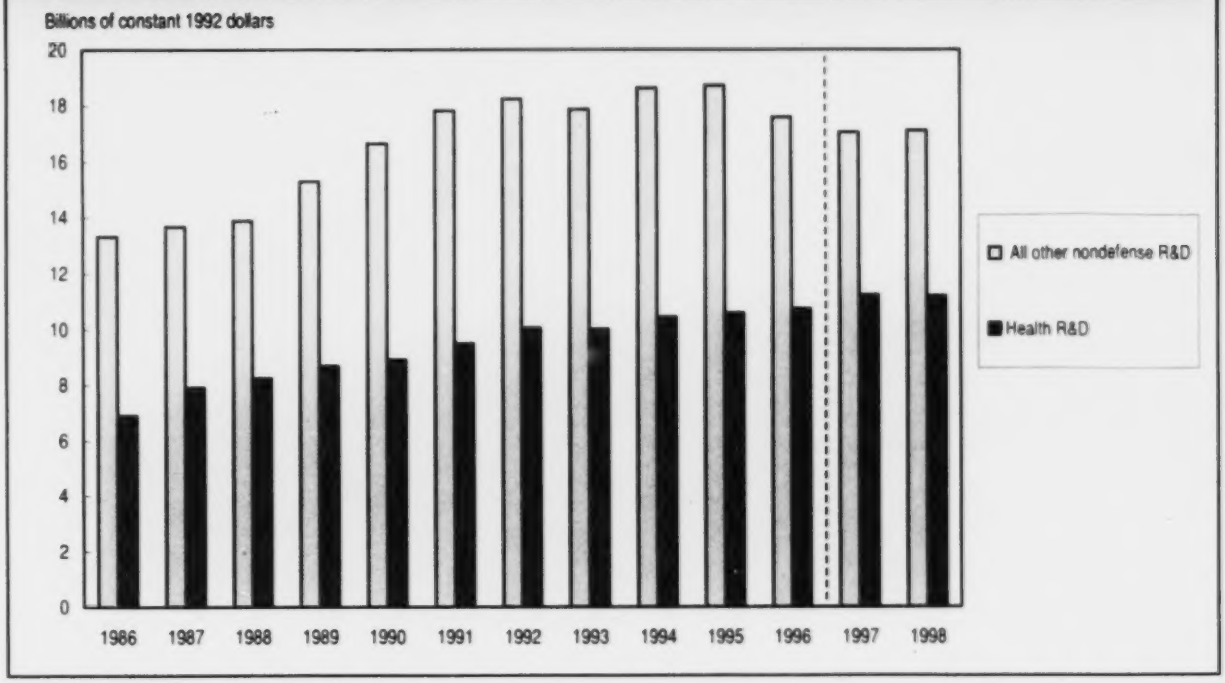
2/ Detailed budget information on DOD's RDT&E activities is available only in total obligational authority (TOA), which is the sum of new budget authority, unobligated budget authority from previous years, and other authorized credits. Adjustment converts TOA to budget authority by subtracting unobligated budget authority from previous years and other authorized credits from TOA.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Data from DoD, "RDT&E Programs (R-1)." Total RDT&E budget authority data from *Budget of the United States Government FY 1998*, Appendix pp. 345-351.

Chart 5. Federal budget authority for health R&D compared with all other nondefense R&D budget authority: Fiscal years 1986-98[1]



[1]1997 numbers are preliminary; 1998 numbers are proposed.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Max Schedule C, "Research and Development Activities," agency budget justification document; and supplemental data obtained from the agencies' budget offices.

Table 8. R&D budget authority for health (550), Fiscal years 1996-98

Agency	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	11,867	12,693	12,998	2.4
Health care services and health research and training (551, 552)	11,695	12,517	12,839	2.6
Department of Health and Human Services (DHHS):				
National Institutes of Health	11,255	11,983	12,335	2.9
Centers for Disease Control	297	346	358	3.5
Agency for Health Care Policy and Research	65	96	87	-9.4
Health Care Financing Administration	55	44	45	2.3
Health Resources and Services Administration	14	14	5	-64.3
Departmental Management	9	34	9	-73.5
Consumer and occupational health and safety (554)	172	176	159	-9.7
Food and Drug Administration (DHHS)	165	173	156	-9.8
Occupational Safety and Health Administration (Dept. of Labor)	7	3	3	0.0

1/ Adjusted to reflect supplementals enacted in Public Law 105-18.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the agencies' budget offices.

funded 10 percent below its FY 1997 level, and the Occupational Safety and Health Administration is expected to be funded at FY 1997 levels. Selected health R&D funding changes are highlighted below.

- The health function accounts for 46 percent of all Federal basic research support. The $7 billion proposed for health-related basic research is 3 percent more than the 1997 level.

- A 3-percent increase—$350 million—is proposed for R&D support to be provided by NIH (table 9). Totaling $12.3 billion, these programs would account for 95 percent of all health R&D funding. The primary mission of NIH is to advance national capabilities for prevention, diagnosis, and treatment of disease through biomedical and behavioral research. NIH is the principal biomedical research agency of the Federal Government.

- Within NIH, the largest amount of R&D funding is proposed for the National Cancer Institute ($2.0 billion), followed by the Office of AIDS Research, OAR, $1.5 billion. Proposed funding increases for each of these units are nearly 3 percent more than FY 1997 levels. OAR provides pass-through

Table 9. R&D budget authority for the National Institutes of Health (NIH), Fiscal years 1996-98

Agency	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	11,255	11,983	12,335	2.9
National Cancer Institute	1,984	2,108	2,169	2.9
National Heart, Lung, and Blood Institute	1,243	1,319	1,351	2.5
National Institute of Allergy and Infectious Diseases	553	589	614	4.2
National Institute of General Medical Sciences	816	863	883	2.2
National Institute of Diabetes and Digestive and Kidney Diseases	727	772	790	2.3
National Institute of Neurological Disorders and Stroke	644	684	703	2.8
National Institute of Mental Health	537	572	597	4.4
National Institute of Child Health and Human Development	513	547	561	2.7
National Institute on Drug Abuse	296	318	348	9.2
National Institute on Aging	438	470	481	2.4
National Center for Research Resources	298	318	327	2.8
National Eye Institute	296	315	322	2.4
National Institute of Environmental Health Sciences	270	290	301	3.9
National Institute of Arthritis and Musculoskeletal and Skin Diseases	232	244	250	2.5
National Institute on Alcohol Abuse and Alcoholism	183	195	202	3.7
National Institute of Dental Research	163	174	181	4.0
National Institute on Deafness and Other Communication Disorders	168	180	185	3.2
National Human Genome Research Institute 1/	165	184	199	8.5
National Library of Medicine	64	67	70	4.9
National Institute of Nursing Research	46	49	51	2.8
John E. Fogarty International Center	16	16	17	3.1
Office of AIDS Research 2/	1,386	1,474	1,512	2.6
Office of the Director	219	236	220	-6.8
Women's Health Initiative	56	57	55	-3.7
Minority Health Initiative	62	63	63	1.0
Other research expenses	100	116	102	-12.5

1/ The National Human Genome Research Institute became an institute on January 14, 1997.

2/ The Office of AIDS Research (OAS) was created in FY 1995 to consolidate NIH-wide AIDS research. OAR funds AIDS research in other institutes. AIDS research funded in individual institutes for FYs 1996 and 1997 has been consolidated in the OAR account for comparison purposes.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data. Excludes non-R&D and R&D facilities components of institute budgets.

SOURCE: Departmental submission to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the NIH budget office.

funding to the other NIH Institutes for AIDS research. OAR dollars for FYs 1996 and 1997 have been adjusted in this report for comparability by collecting AIDS funds under the OAR line item. National Heart, Lung, and Blood Institute is the third largest funded Institute, slated for $1.4 billion (2.5 percent more than 1997 levels).

- With few exceptions, each of the 19 Institutes and Centers comprising NIH will increase between 2 and 9 percent over FY 1997 funding levels. With support from the Administration, the National Center for Human Genome Research became an institute in January 1997 and renamed the National Human Genome Research Institute. NIH expects to increase the new institute's funding by 8.5 percent, up $15 million over the FY 1997 level. R&D for the NIH Director's Office is proposed to decrease by 7 percent to $220 million. Within the Director's Office, Women's Health Initiative will receive a 4-percent decrease in R&D funding, while funding for the Minority Health Initiative will increase only 1 percent over the FY 1997 levels.

- Consumer and occupational health and safety (subfunction 554) is slated to be funded at 10 percent below the FY1997 level. The Food and Drug Administration (FDA) accounts for 98 percent of these funds. FDA activities are directed toward protecting the health of the Nation against impure and unsafe food, drugs and cosmetics, and other potential hazards.

Space Research and Technology

NASA funds all R&D that is specifically budgeted in space flight, research, and supporting activities (subfunction 252). NASA conducts research for the solution of problems of flight within and outside the Earth's atmosphere and develops, constructs, tests, and operates aeronautical and space vehicles. R&D budget authority is proposed to increase by nearly 3 percent in 1998 to $8 billion and account for 11 percent of total Federal R&D funds. As recently as 1986, space accounted for a 5-percent share of the R&D total. The space share has been steadily increasing over the last ten years. Selected space research and technology R&D funding changes are highlighted below:

- Four of NASA's science programs—Space Station, Space Science, MPTE, and Space Transportation Technology—will comprise 88 percent or $7 billion of the total space R&D budget authority in FY 1998 (table 10).

- NASA's biggest funded activity, the Space Station program (which includes Russia as a partner) is slated for an 8-percent increase in R&D to $2.4 billion in FY 1998, and would account for 30 percent of total space R&D budget authority. The Space Station is planned to be a permanent outpost in space where humans would live and work productively for extended periods of time. The intent is to provide an advanced research laboratory to explore space and employ its resources, as well as the opportunity to learn to build, operate, and maintain systems in space.

- Space science, having the second largest budget ($2.3 billion, which is 3 percent more than the FY 1997 funding level) of the four categories, is the portion of the NASA budget devoted to expanding knowledge of the Earth, the solar system, and the universe beyond. The budget request includes funds to continue development of the Advanced X-Ray Astrophysics Facility, which is scheduled for launch in 1998. The Cassini program is also funded under space science. The Cassini mission will explore the gaseous outer planets such as Saturn and Jupiter and is scheduled for launch in the Fall of 1997. Other programs include the Mars Surveyor, New Millennium Spacecraft, and Discovery.

- MTPE will receive a 4-percent ($62 million) increase in funding to $1.6 billion in FY 1998. MTPE programs include the earth observing system satellites and information system, the Landsat satellite, and various scientific research and data analysis activities. This activity includes the study of global climate change and integrated functioning of the Earth as a system.

Table 10. R&D budget authority for space research and technology (252)
Fiscal years 1996-98

Funding Category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	7,844	7,795	8,004	2.7
National Aeronautics and Space Administration (NASA):				
Space Station 1/	2,083	2,248	2,431	8.1
Other human space flight	69	87	112	29.1
Space science	2,420	2,227	2,302	3.4
Life and microgravity sciences 1/	681	482	330	-31.6
Mission to Planet Earth	1,459	1,529	1,591	4.0
Space transportation technology	533	644	695	8.0
Academic programs	124	139	115	-17.2
Safety, reliability & quality assurance 2/	0	0	5	NA
Mission communication services	476	439	423	-3.6

1/ Space Station related research in Life and microgravity sciences is transferred to the Space Station account in FY 1998.

2/ Funded in Space transportation technology in FYs 1996 and 1997.

NOTES: Includes funds for research and research program management, but excludes fixed capital equipment costs. Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; budget justification documents; and supplemental data obtained from the NASA budget and the NASA budget office.

- The Space Transportation Technology program is slated to get an 8-percent ($51 million) increase in funding to $0.7 billion. This initiative provides for planning and assessing technology development requirements.

General Science

Research activities in general science (subfunction 251), of which 94 percent are basic research, are funded by NSF and DOE. Total research support in general science is proposed to increase by 4 percent in 1998 to $3 billion. Of this research total, 76 percent are slated for NSF and 24 percent are for DOE. Selected general science changes proposed for R&D funding in FY 1998 are highlighted below.

- NSF is to receive $2.3 billion in research budget authority, an increase of $90 million, or 4 percent, more than the 1997 funding level. Funding increases are proposed for all seven of NSF's research directorates (table 11).

- Funds for mathematics and physical sciences (MPS) will increase by 3 percent (a $19-million increase over 1997) and will account for 30 percent—$693 million—of the proposed NSF research budget authority. Through its MPS, NSF provides about two-thirds of the Federal support for ground-based astronomy and nearly half of all Federal support of academic research in the mathematical sciences.

- The Engineering Directorate is proposed to experience the third largest absolute increase, up $12 million to $359 million. Of this total, $66 million is proposed for more than 20 Engineering Research Centers and more than 50 State Industry/University Cooperative Research Centers for which NSF provides funding. Overall, NSF provides about 33 percent of the total support for engineering research at U.S. universities and colleges.

- A 1-percent increase is proposed for NSF's Geosciences Directorate bringing its funding to $425 million in 1998. This will provide about 50 percent of Federal support for basic research in atmospheric sciences. Through this Directorate, NSF serves as the principal source of Federal funding for university-based fundamental research in the geosciences.

- Expecting to get the largest absolute increase, NSF's Computer and Information Science and Engineering Directorate is to receive $25 million more for research in 1998, a 10-percent increase. This Directorate provides more than 50 percent of all Federal support for fundamental research in computer science at universities and colleges.

- The Social, Behavioral and Economic Sciences Directorate is scheduled to get $7 million (up 7 percent) more than its FY 1997 funding level. This Directorate supports 80 percent of federally funded basic research in anthropological archeology and more than one-third in economics. The Directorate also funds multidisciplinary research on topics including human capital, learning and intelligent systems, decision making related to risk, and the use of digital libraries.

Table 11. R&D budget authority for general science and basic research (251). Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	2,846	2,962	3,086	4.2
National Science Foundation (NSF)	2,175	2,257	2,347	4.0
Mathematical and physical sciences	655	674	693	2.8
Geosciences	410	422	425	0.8
Biological sciences	304	313	324	3.4
Engineering	323	347	359	3.6
Computer and information science and engineering	237	247	272	10.1
U.S. polar research programs	59	59	62	5.8
Social, behavioral, and economic sciences	107	106	113	6.7
Education and human resources	93	90	99	9.9
Budget authority adjustment 1/	-13	0	0	NA
Department of Energy	671	705	739	4.9
High energy physics	469	489	517	5.7
Nuclear physics	202	215	222	3.1

1/ Detailed R&D funding data for NSF are expressed only in obligations. Budget authority adjustment converts obligations to budget authority.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; budget justification documents; and supplemental data obtained from the agencies' budget offices.

- General science programs at DOE are to increase by 5 percent to $739 million. Research in high energy physics programs is to increase by 6 percent, or $28 million. Nuclear physics research funding is expected to rise 3 percent, or $7 million.

ENERGY

Three agencies provide support for R&D activities in energy (function 270): DOE, which provides 94 percent of the funding in this area; the Tennessee Valley Authority (TVA); and the Nuclear Regulatory Commission (NRC). Total energy R&D budget authority is proposed to be $2.2 billion in 1998, a 1-percent decrease from the FY 1997 level. Selected energy R&D funding changes are highlighted below.

- DOE's energy budget is proposed to decrease about 3 percent, to $2.1 billion in 1998. Energy budgets for TVA will increase 73 percent to $71 million. NRC is slated to be funded 5 percent below its FY 1997 level of $57 million (table 12). Overall funding for energy-related basic research is proposed to reach $1.3 billion, an 8-percent gain.

- Proposed 1998 R&D budget authority for DOE's fossil fuel programs is expected to decrease drastically below the FY 1997 levels due to a proposal to cancel nearly $300 million in unspent, previously appropriated funds for the Clean Coal Technology Program.

- R&D on energy conservation is proposed to increase 20 percent, or $63 million, to $0.4 billion. Programs under this subfunction category include R&D support for building, industrial, and transportation technologies

- A 32-percent increase is proposed for solar and renewable energy research (including solar energy, hydrogen research, geothermal energy, hydropower, and electric energy)—to $0.3 billion in 1998.

- Basic energy sciences, which support both research and scientific facilities, are to receive a $28 million, or a 5-percent increase to $593 million. Included in this funding category are materials and chemical sciences, engineering and geosciences, energy biosciences, and equipment and construction projects.

- DOE's biological and environmental research programs promote the development and application of biotechnology to improve health and protect the environment. Proposed R&D in this area is to increase 9.5 percent to $349 million. Research on the Human Genome is to account for 24 percent of this total.

- The computational and technology research account, created in FY 1997 out of components of basic energy science, technology transfer, and magnetic fusion accounts, is to increase 12 percent from $152 million in FY 1997 to $170 million in FY 1998.

Table 12. R&D budget authority for energy (270), Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary 1/	1998 proposed	Percent change 1997-98
	[In millions of dollars]			
Total	2,521	2,259	2,229	-1.3
Department of Energy	2,413	2,161	2,104	-2.6
Fossil energy (271)	434	270	-20	-107.3
Clean coal technology 2/	147	-2	-286	NA
Cooperative R&D	6	6	6	3.6
Petroleum, coal, and gas program	281	266	261	-2.1
Energy supply (271)	1,670	1,567	1,736	10.8
Nuclear energy	112	95	109	14.1
Magnetic fusion	218	209	203	-2.8
Solar and renewables 3/	252	235	311	32.2
Energy research analysis	3	2	2	-14.3
Environment, safety, and health	18	0	0	NA
Small business innovative research	67	0	0	NA
Technology transfer	14	0	0	NA
Basic energy sciences	653	565	593	5.0
Computational and technology res. 4/	0	152	170	11.8
University and science education	18	0	0	NA
Multiprogram lab support	6	0	0	NA
Biological and environmental research	309	318	349	9.5
Human genome	74	78	85	9.3
All other research	235	241	264	9.6
Rescission in P.L. 105-18	0	-9	0	NA
Uranium enrichment (271)	2	0	0	NA
Energy conservation (272)	306	324	387	19.7
Tennessee Valley Authority (271)	37	41	71	73.2
Nuclear Regulatory Commission (276)	71	57	54	-5.3

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

2/ Fiscal year 1998 budget contains a proposal to cancel $286 million in unspent, previously appropriated funds for Clean Coal Technology.

3/ Includes R&D formerly funded in solar energy, geothermal, electric energy, electric storage, hydropower, and hydrogen accounts.

4/ New account created in FY 1997 out of components of basic energy sciences, technology transfer, and magnetic fusion accounts.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; DOE's budget justification documents, and supplemental data obtained from the agencies' budget offices.

All Other Functions

Table 13. R&D budget authority for transportation (400), Fiscal years 1996-98

Budget function	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	1,795	1,827	1,939	6.2
Air transportation (402)	1,435	1,435	1,502	4.7
National Aeronautics and Space Admin. 1/	1,223	1,199	1,273	6.2
Aeronautical research and technology	1,223	1,199	1,273	6.2
Federal Aviation Administration (DOT)	212	236	229	-3.0
Ground transportation (DOT) (401)	331	361	406	12.5
Federal Highway Administration	254	288	328	13.9
National Highway Traffic Safety Administration	33	37	44	18.9
Federal Railroad Administration	27	20	21	5.0
Federal Transit Administration	17	16	13	-18.8
Water transportation (DOT) (403)	18	18	19	5.6
U.S. Coast Guard	18	18	19	5.6
Maritime Administration	0	0	0	NA
Other transportation (DOT) (407) 2/	11	13	12	-7.7

1/ Includes funds for research and research program management.

2/ Includes Office of the Secretary and the Research and Special Programs Administration.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the agencies' budget offices.

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Table 14. R&D budget authority for natural resources and environment (300): Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	1,802	1,842	1,902	3.2
Pollution control and abatement (304)				
Environmental Protection Agency	482	510	554	8.5
Science and Technology 1/	478	508	552	8.6
Air quality	74	70	71	1.0
Water quality	20	25	28	11.3
Drinking water	25	40	36	-9.9
Hazardous waste	22	15	9	-35.8
Hazardous substances	24	35	40	12.5
Pesticides	12	19	32	67.9
Toxic substances	15	12	13	11.5
Global change	21	14	21	46.1
Lab/ field/ HQ expenses	54	82	84	2.2
Multimedia research	203	189	211	11.6
Program management	8	7	7	3.0
Leaking underground storage tanks (LUST)	1	1	1	4.1
Oil spill response research	1	1	1	0.0
Other accounts	3	(6/)	0	-100.0
Conservation and land management (302)	201	203	201	-1.0
Forest Service (USDA)	178	180	180	0.0
Department of the Interior 2/	23	23	21	-8.7
Recreational resources (303)	157	159	178	12.3
Geological Survey 3/ (Interior)	137	138	145	5.5
National Park Service (Interior)	20	21	33	57.1
Water resources (301)	51	51	50	-2.0
Corps of Engineers (DOD)	44	44	42	-4.5
Bureau of Reclamation (Interior)	7	7	8	14.3
Other natural resources (306)	911	919	919	-0.1
Geological Survey 4/ (Interior)	382	386	394	1.9
National Oceanic and Atmospheric Administration (Commerce)	529	533	525	-1.5
Bureau of Mines 5/ (Interior)	0	0	0	NA

1/ Includes budget authority for R&D transferred from Superfund account.

2/ Includes Bureau of Land Management, Office of Surface Mining and Reclamation, and Minerals Management Service.

3/ Natural resources research formerly funded by the National Biological Service.

4/ National mapping, water resources, and geological research.

5/ Eliminated in FY 1996.

6/ Less than $500,000

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C;
budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 15. R&D budget authority for other natural resources (306)
Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	911	919	919	-0.1
U.S. Geological Survey (Interior)	382	386	394	1.9
Geologic and mineral resource surveys and mapping	228	229	228	-0.7
Water resources investigations	133	134	139	4.0
National mapping, geography, and survey	21	24	27	16.1
National Oceanic and Atmospheric Administration (Commerce)	529	533	525	-1.5
Oceanic and atmospheric research	199	205	205	0.0
Climate and air quality	101	104	112	7.6
All other research	98	102	94	-7.9
National Marine Fisheries Services	199	200	203	1.2
Fishery products promotion and development 1/	9	0	4	918.6
All other research	190	200	199	-0.5
National Ocean Service	20	24	24	0.0
National Weather Service	36	34	23	-31.1
National Environmental Satellite, Data, and Information Service	8	8	8	0.0
Program support	58	56	54	-4.3
Fleet modernization, shipbuilding, and conversion	8	5	8	47.8
Bureau of Mines (Interior) 2/	0	0	0	NA

1/ Actual functional code is 376, other advancement of commerce.
2/ Eliminated in FY 1996.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 16. R&D budget authority for agriculture (350). Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	1,176	1,185	1,196	0.9
Agricultural research and services (352):				
Department of Agriculture				
Agricultural Research Service	678	687	697	1.5
Research on plant sciences	230	239	242	1.2
Research on commodity conversion and delivery	138	140	139	-1.3
Research on animal sciences	112	113	114	1.1
Research on soil, water, and air sciences	85	83	81	-3.2
Research on human nutrition	59	62	74	19.0
Integration of agricultural systems	33	30	28	-4.4
Agricultural information and library services	20	18	18	0.4
Cooperative State Research, Education, and Extension Service	406	405	406	0.3
National Research Initiative	94	94	130	38.0
Plant systems	36	36	47	30.4
Animal systems	23	23	30	27.7
Natural resources and environment	17	17	27	57.0
Nutrition, food safety, and health	7	7	11	52.6
Processes and new products	7	7	9	33.2
Rural development, markets, and trade	4	4	7	66.8
Payments under the Hatch Act	169	169	169	0.0
Special research grants	50	50	10	-79.8
Improved pest control	12	12	25	110.2
Payments to 1890 colleges and Tuskegee Institute (Evans-Allen)	28	28	28	0.0
McIntire-Stennis cooperative forestry	20	20	20	0.0
Other research programs	19	18	17	-5.3
Administration	14	14	7	-49.1
Economic Research Service	53	53	54	1.9
Animal & Plant Health Inspection Service	17	17	17	0.0
National Agricultural Statistics Service	4	4	4	0.0
Agricultural Marketing Service	8	8	8	0.0
Federal Grain Inspection Service 1/	3	3	-1	-133.3
Foreign Agricultural Service	1	1	1	0.0
Alternative Agricultural Research and Commercialization	6	7	10	42.9

1/ FY 1998 figure reflects proposed rescission.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: USDA's submission to Office of Management and Budget MAX Schedule C; budget justification documents; and supplemental data obtained from the USDA budget office.

Funding category	1996 actual	1997 preliminary 1/	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	432	435	498	14.4
Other advancement of commerce (376):				
Department of Commerce				
National Institute of Standards and Technology (NIST)	422	427	487	13.9
Electronics & electrical engineering	34	35	37	5.5
Manufacturing engineering	19	20	20	0.1
Chemical science and technology	31	32	32	0.1
Physics	24	25	25	0.1
Materials science	38	39	40	0.1
Building and fire research	12	13	13	0.1
Computer systems and applied math	42	42	42	0.1
Technology assistance	0	2	2	0.5
Research support activities	16	16	16	0.2
Industrial technology services				
Advanced Technology Program	206	203	260	28.3
Technology Administration	0	0	2	NA
Bureau of the Census	5	4	4	0.0
National Telecommunications and Information Administration	5	4	5	25.0

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Departmental submission to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the agencies' budget offices.

Table 1. R&D budget authority for education, training, employment, and social services: 1996–98 fiscal years

Budget function	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	331	370	411	11.1
Research and general education aids (501, 502, 503)	229	249	278	11.6
Department of Education programs	95	115	139	20.9
Smithsonian Institution programs	134	134	139	3.7
Social services (506)	73	92	106	15.2
Administration for Children and Families (DHHS)	3	14	29	107.1
Administration on Aging (DHHS)	0	8	6	-25.0
Rehabilitation services (Education)	70	70	71	1.4
Training and employment (504) (Labor's Employment and Training Admin.)	29	29	27	-6.9
Other labor services (505) (Labor)	0	0	0	NA

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the agencies' budget offices.

Table 19. R&D budget authority for the Agency for International Development (AID) and other international programs (150): Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total (150)	252	190	246	29.5
Agency for International Development (AID) (151)	223	169	225	33.1
International Security Assistance (152)	29	21	21	0.0

NOTES: Because of rounding, components may not add to totals. Percentage change derived from unrounded data.

SOURCE: AID submission to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the AID budget office.

Table 20. R&D budget authority for veterans benefits and services (700): Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percent change 1997-98
	[In millions of dollars]			
Total	259	267	239	-10.5
Department of Veterans Affairs				
Medical and prosthetic research (703)	259	267	239	-10.5

NOTE: Includes administration and operating expenses related to the VA's research.

SOURCE: Departmental submission to Office of Management and Budget MAX Schedule C.

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Table 21. R&D budget authority for administration of justice (730): Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	56	67	70	4.5
Department of Justice	45	56	59	5.4
Office of Justice Programs (754)	37	48	51	6.3
Federal Bureau of Investigation (751)	2	2	2	0.0
Federal Prison System (753)	5	5	5	0.0
Drug Enforcement Administration (751)	0	0	0	NA
Immigration and Naturalization Service (751)	1	1	1	0.0
Department of the Treasury	11	11	11	0.0
U.S. Customs Service (751)	11	11	11	0.0

NOTES: Because of rounding, components may not add to the totals shown. Percentage change is derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the agencies' budget offices.

Table 22. R&D budget authority for community and regional development (450): Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	50	54	46	-14.8
Tennessee Valley Authority (452)	15	19	6	-68.4
Department of Housing and Urban Development (451)	34	34	39	14.7
Department of Commerce Economic Development Admin. (452)	1	1	1	0.0

NOTES: Because of rounding, components may not add to the totals shown. Percentage change is derived from unrounded data.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; and supplemental data obtained from the agencies' budget offices.

Table 23. R&D budget authority for income security (600), Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	16	10	10	0.0
Social Security Administration 1/	15	9	9	0.0
Department of Labor	1	1	1	0.0
Pension Benefit Guarantee Corporation (601)	1	1	1	0.0

1/ Actual functional code is 650, Social Security.

NOTES: Because of rounding, components may not add to the totals shown. Percentage change is derived from unrounded data.

KEY: NA = Not applicable

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C;
and supplemental data obtained from the agencies' budget offices.

Table 24. R&D budget authority for general government (800), Fiscal years 1996-98

Funding category	1996 actual	1997 preliminary	1998 proposed	Percentage change 1997-98
	[In millions of dollars]			
Total	2	2	2	0.0
Department of Treasury				
Engraving and Printing (803)	2	2	2	0.0

NOTE: Percentage change is derived from unrounded data.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C;
and supplemental data obtained from the agencies' budget offices.

Historical Tables

Table 25a. Federal R&D obligations, by selected budget function, Fiscal years 1955-60

[In millions of dollars]

Budget function	1955	1956	1957	1958	1959	1960
Total	2,533	2,988	3,932	4,570	6,694	7,522
National defense	2,151	2,535	3,327	3,801	5,556	6,107
Health	67	83	140	177	233	305
All other functions	315	370	465	592	904	1,140

NOTE: Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities," and supplemental data obtained from the agencies' budget offices.

Table 25a. Federal R&D obligations, by selected budget function, Fiscal years 1955-60

[In millions of constant FY 1992 dollars]

Budget function	1955	1956	1957	1958	1959	1960
Total	12,552	14,297	18,120	20,549	29,398	32,269
National defense	10,659	12,129	15,332	17,091	24,401	26,199
Health	332	397	645	796	1,023	1,308
All other functions	1,561	1,770	2,143	2,662	3,970	4,891

NOTES: Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities," and supplemental data obtained from the agencies' budget offices.

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Table 25b. Federal R&D obligations, by selected budget function, Fiscal years 1961-66

[In millions of dollars]

Budget function	1961	1962	1963	1964	1965	1966
Total	9,059	10,290	12,495	14,225	14,614	15,320
National defense	7,005	7,238	7,764	7,829	7,342	7,536
Health	405	551	626	728	792	900
Space research and technology	777	1,413	2,812	4,241	4,887	4,976
Energy	373	448	515	571	585	575
General science	137	187	246	277	304	377
Natural resources and environment	73	108	120	134	159	189
Transportation	55	101	142	122	147	251
Agriculture	125	136	146	165	195	201
All other functions	108	107	125	160	203	315

NOTE: Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" and supplemental data obtained from the agencies' budget offices.

Table 25b. Federal R&D obligations, by selected budget function, Fiscal years 1961-66

[In millions of constant FY 1992 dollars]

Budget function	1961	1962	1963	1964	1965	1966
Total	38,272	43,036	51,590	58,014	58,597	60,126
National defense	29,594	30,272	32,056	31,929	29,439	29,576
Health	1,711	2,304	2,585	2,969	3,176	3,532
Space research and technology	3,283	5,910	11,610	17,296	19,595	19,529
Energy	1,576	1,874	2,126	2,329	2,346	2,257
General science	579	782	1,016	1,130	1,219	1,480
Natural resources and environment	308	452	495	546	638	742
Transportation	232	422	586	498	589	985
Agriculture	528	569	603	673	782	789
All other functions	456	448	516	653	814	1,236

NOTES: Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" and supplemental data obtained from the agencies' budget offices.

Table 25c. Federal R&D obligations, by budget function, Fiscal years 1967-72

[In millions of dollars]

Budget function	1967	1968	1969	1970	1971	1972
Total	16,529	15,921	15,641	15,339	15,543	16,496
National defense	8,566	8,275	8,356	7,981	8,110	8,902
Health	915	1,021	1,088	1,084	1,288	1,547
Space research and technology	4,778	4,304	3,799	3,606	3,048	2,932
Energy	600	657	597	574	556	574
General science	409	437	433	452	513	625
Natural resources and environment	320	331	323	340	416	479
Transportation	380	304	404	535	728	558
Agriculture	218	217	221	238	259	294
Education, training, employment, and social services	154	166	169	164	215	235
International affairs	18	17	26	32	32	29
Veterans benefits and services	41	45	50	59	63	69
Commerce and housing credit	43	48	54	79	90	50
Community and regional development	37	44	32	47	65	66
Administration of justice	(1/)	1	5	9	10	23
Income security	48	50	78	136	145	106
General government	3	5	5	6	7	8

1/ Less than $500,000

NOTE: Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" and supplemental data obtained from the agencies' budget offices.

Table 25c. Federal R&D obligations, by budget function, Fiscal years 1967-72

[In millions of constant FY 1992 dollars]

Budget function	1967	1968	1969	1970	1971	1972
Total	62,776	58,340	54,861	51,113	49,265	49,897
National defense	32,533	30,322	29,309	26,594	25,705	26,927
Health	3,475	3,741	3,816	3,612	4,082	4,679
Space research and technology	18,147	15,771	13,325	12,016	9,661	8,869
Energy	2,279	2,407	2,094	1,913	1,762	1,736
General science	1,553	1,601	1,519	1,506	1,626	1,891
Natural resources and environment	1,215	1,213	1,133	1,133	1,319	1,449
Transportation	1,443	1,114	1,417	1,783	2,307	1,688
Agriculture	828	795	775	793	821	889
Education, training, employment, and social services	585	608	593	546	681	711
International affairs	68	62	91	107	101	88
Veterans benefits and services	156	165	175	197	200	209
Commerce and housing credit	163	176	189	263	285	151
Community and regional development	141	161	112	157	206	200
Administration of justice	(1/)	4	18	30	32	70
Income security	182	183	274	453	460	321
General government	11	18	18	20	22	24

1/ Less than $500,000

NOTES: Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" and supplemental data obtained from the agencies' budget offices.

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Table 25d. Federal R&D obligations, by budget function, Fiscal years 1973-77

[In millions of dollars]

Budget function	1973	1974	1975	1976	1977
Total	16,800	17,410	19,039	20,780	23,450
National defense	9,002	9,016	9,679	10,430	11,864
Health	1,585	2,069	2,170	2,351	2,629
Space research and technology	2,824	2,702	2,764	3,130	2,832
Energy	630	759	1,363	1,649	2,562
General science	658	749	813	858	974
Natural resources and environment	554	516	624	683	753
Transportation	572	693	635	631	708
Agriculture	308	313	342	383	457
Education, training, employment, and social services	290	236	239	255	230
International affairs	28	24	29	42	66
Veterans benefits and services	74	85	95	98	107
Commerce and housing credit	50	51	65	69	71
Community and regional development	78	82	93	109	101
Administration of justice	33	35	44	35	30
Income security	106	71	72	48	55
General government	7	9	12	12	13

NOTE: Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" and supplemental data obtained from the agencies' budget offices.

Table 25d. Federal R&D obligations, by budget function, Fiscal years 1973-77

[In millions of constant FY 1992 dollars]

Budget function	1973	1974	1975	1976	1977
Total	48,696	47,105	46,687	47,519	49,872
National defense	26,093	24,394	23,735	23,851	25,232
Health	4,594	5,598	5,321	5,376	5,591
Space research and technology	8,186	7,311	6,778	7,158	6,023
Energy	1,826	2,054	3,342	3,771	5,449
General science	1,907	2,027	1,994	1,962	2,071
Natural resources and environment	1,606	1,396	1,530	1,562	1,601
Transportation	1,658	1,875	1,557	1,443	1,506
Agriculture	893	847	839	876	972
Education, training, employment, and social services	841	639	586	583	489
International affairs	81	65	71	96	140
Veterans benefits and services	214	230	233	224	228
Commerce and housing credit	145	138	159	158	151
Community and regional development	226	222	228	249	215
Administration of justice	96	95	108	80	64
Income security	307	192	177	110	117
General government	20	24	29	27	28

NOTES: Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" and supplemental data obtained from the agencies' budget offices.

Table 25e. Federal R&D budget authority, by budget function: Fiscal years 1978-83

[In millions of dollars]

Budget function	1978	1979	1980	1981	1982	1983
Total	25,976	28,208	29,739	33,735	36,115	38,768
National defense	12,899	13,791	14,946	18,413	22,070	24,936
Health	2,968	3,401	3,694	3,871	3,869	4,298
Space research and technology	2,939	3,136	2,738	3,111	2,584	2,134
Energy	3,134	3,461	3,603	3,501	3,012	2,578
General science	1,050	1,119	1,233	1,340	1,359	1,502
Natural resources and environment	904	1,010	999	1,061	965	952
Transportation	768	798	887	869	791	876
Agriculture	501	552	585	659	693	745
Education, training, employment and social services	345	354	468	298	228	189
International affairs	57	117	125	160	165	177
Veterans benefits and services	111	123	126	143	139	157
Commerce and housing credit	77	93	101	106	104	107
Community and regional development	92	127	119	104	63	44
Administration of justice	44	47	45	34	31	37
Income security	67	57	47	43	32	32
General government	20	23	22	22	10	6

NOTE: Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities," and supplemental data obtained from the agencies' budget offices.

Table 25e. Federal R&D budget authority, by budget function: Fiscal years 1978-83

[In millions of constant FY 1992 dollars]

Budget function	1978	1979	1980	1981	1982	1983
Total	51,652	51,777	50,108	51,773	51,770	53,121
National defense	25,649	25,314	25,183	28,258	31,637	34,168
Health	5,902	6,243	6,224	5,941	5,546	5,889
Space research and technology	5,844	5,756	4,613	4,774	3,704	2,924
Energy	6,232	6,353	6,071	5,373	4,318	3,532
General science	2,088	2,054	2,078	2,056	1,948	2,058
Natural resources and environment	1,798	1,854	1,683	1,628	1,383	1,304
Transportation	1,527	1,465	1,495	1,334	1,134	1,200
Agriculture	996	1,013	986	1,011	993	1,021
Education, training, employment and social services	686	650	789	457	327	259
International affairs	113	215	211	246	237	243
Veterans benefits and services	221	226	212	219	199	215
Commerce and housing credit	153	171	170	163	149	147
Community and regional development	183	233	201	160	90	60
Administration of justice	87	86	76	52	44	51
Income security	133	105	79	66	46	44
General government	40	42	37	34	14	8

NOTES: Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities," and supplemental data obtained from the agencies' budget offices.

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Table 25f. Federal R&D budget authority, by budget function: Fiscal years 1984-89

[In millions of dollars]

Budget function	1984	1985	1986	1987	1988	1989
Total	44,214	49,887	53,249	57,069	59,106	62,115
National defense	29,287	33,698	36,926	39,152	40,099	40,665
Health	4,779	5,418	5,565	6,556	7,076	7,773
Space research and technology	2,300	2,725	2,894	3,398	3,683	4,555
Energy	2,581	2,389	2,286	2,053	2,126	2,419
General science	1,676	1,862	1,873	2,042	2,160	2,373
Natural resources and environment	963	1,059	1,062	1,133	1,160	1,255
Transportation	1,040	1,030	917	908	896	1,064
Agriculture	762	836	815	822	882	907
Education, training, employment and social services	200	220	248	267	285	347
International affairs	192	210	211	223	224	279
Veterans benefits and services	218	193	183	215	195	212
Commerce and housing credit	110	114	111	110	122	128
Community and regional development	46	50	88	99	108	74
Administration of justice	24	47	41	49	51	45
Income security	26	21	14	25	23	27
General government	8	17	14	17	17	15

NOTE: Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" and supplemental data obtained from the agencies' budget offices.

Table 25f. Federal R&D budget authority, by budget function: Fiscal years 1984-89

[In millions of constant FY 1992 dollars]

Budget function	1984	1985	1986	1987	1988	1989
Total	58,345	63,623	66,058	68,808	68,880	69,449
National defense	38,647	42,977	45,808	47,205	46,730	45,466
Health	6,306	6,910	6,904	7,905	8,246	8,691
Space research and technology	3,035	3,475	3,590	4,097	4,292	5,093
Energy	3,406	3,047	2,836	2,475	2,478	2,705
General science	2,212	2,375	2,324	2,462	2,517	2,653
Natural resources and environment	1,271	1,351	1,317	1,366	1,352	1,403
Transportation	1,372	1,314	1,138	1,095	1,044	1,190
Agriculture	1,006	1,066	1,011	991	1,028	1,014
Education, training, employment and social services	264	281	308	322	332	388
International affairs	253	268	262	269	261	312
Veterans benefits and services	288	246	227	259	227	237
Commerce and housing credit	145	145	138	133	142	143
Community and regional development	61	64	109	119	126	83
Administration of justice	32	60	51	59	59	50
Income security	34	27	17	30	27	30
General government	11	22	17	20	20	17

NOTES: Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" and supplemental data obtained from the agencies' budget offices.

Table 25g. Federal R&D budget authority, by budget function, Fiscal years 1990-98

[In millions of dollars]

Budget function	1990	1991	1992	1993	1994	1995	1996	preliminary 1997 1/	proposed 1998
Total	63,781	65,898	68,398	69,684	68,331	68,791	69,049	70,988	71,602
National defense	39,925	39,328	40,061	41,249	37,764	37,204	37,801	39,030	38,726
Health	8,308	9,226	10,055	10,280	10,993	11,407	11,867	12,693	12,998
Space research and technology	5,765	6,511	6,744	6,988	7,414	7,916	7,844	7,795	8,004
Energy	2,726	2,953	3,153	2,677	2,873	2,844	2,521	2,259	2,229
General science	2,410	2,635	2,659	2,691	2,712	2,794	2,846	2,962	3,086
Natural resources and environment	1,386	1,582	1,688	1,802	2,062	1,988	1,802	1,842	1,902
Transportation	1,045	1,231	1,523	1,703	1,888	1,833	1,795	1,827	1,939
Agriculture	950	1,052	1,155	1,152	1,193	1,194	1,176	1,185	1,196
Education, training, employment, and social services	374	433	365	348	373	369	331	370	411
International affairs	375	378	371	382	254	287	252	190	246
Veterans benefits and services	216	219	245	250	265	267	259	267	239
Commerce and housing credit	140	178	192	220	380	525	432	435	498
Community and regional develop.	67	88	95	57	68	70	50	54	46
Administration of justice	44	51	51	49	46	59	56	67	70
Income security	33	30	37	36	45	43	16	10	10
General government	17	4	4	(2/)	0	1	2	2	2

1/ Adjusted to reflect rescissions and supplementals enacted in Public Law 105-18.

2/ Less than $500,000

NOTES: Data for 1990-96 are actual budget authority. Data for 1997 are preliminary estimates, and data for 1998 are proposed based on the fiscal year 1998 budget.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 25g. Federal R&D budget authority, by budget function: Fiscal years 1990-98

[In millions of constant FY 1992 dollars]

Budget function	1990	1991	1992	1993	1994	1995	1996	preliminary 1997 1/	proposed 1998
Total	68,448	67,827	68,398	68,086	65,054	63,931	62,728	62,879	61,733
National defense	42,847	40,479	40,061	40,187	35,953	34,575	34,341	34,571	33,388
Health	8,916	9,496	10,055	10,015	10,466	10,601	10,781	11,243	11,206
Space research and technology	6,187	6,701	6,744	6,808	7,059	7,357	7,126	6,904	6,901
Energy	2,925	3,039	3,153	2,608	2,735	2,643	2,290	2,001	1,922
General science	2,586	2,712	2,659	2,621	2,581	2,596	2,586	2,624	2,661
Natural resources and environment	1,487	1,628	1,688	1,755	1,963	1,848	1,637	1,632	1,640
Transportation	1,121	1,267	1,523	1,660	1,798	1,704	1,630	1,618	1,672
Agriculture	1,020	1,083	1,155	1,122	1,136	1,109	1,068	1,050	1,031
Education, training, employment, and social services	401	446	365	339	355	343	301	328	354
International affairs	402	389	371	372	242	267	229	168	212
Veterans benefits and services	232	226	245	244	252	239	235	237	206
Commerce and housing credit	150	184	192	214	362	488	392	386	429
Community and regional develop.	72	91	95	56	64	65	45	48	40
Administration of justice	47	52	51	48	44	55	51	59	60
Income security	35	31	37	35	43	40	15	9	9
General government	18	4	4	0	0	1	2	2	2

1/ Adjusted to reflect rescissions and supplementals enacted in Public Law 105-18.
2/ Less than $500,000

NOTES: Data for 1990-96 are actual budget authority. Data for 1997 are preliminary estimates, and data for 1998 are proposed based on the fiscal year 1998 budget. GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 26a. Budget authority for basic research, by budget function, Fiscal years 1978-83

[In millions of dollars]

Budget function	1978	1979	1980	1981	1982	1983
Total	3,665	4,108	4,716	5,107	5,305	6,247
Health	1,246	1,579	1,761	1,951	1,953	2,475
General science	962	1,026	1,152	1,256	1,296	1,439
Space research and technology	412	440	482	445	434	501
National defense	320	365	552	610	696	788
Energy	157	172	200	220	260	320
Agriculture	197	222	246	281	295	326
Natural resources and environment	207	131	136	131	139	156
Transportation	70	75	79	89	102	117
Education, training, employment, and social services	57	59	61	66	78	70
Commerce and housing credit	9	10	15	17	17	19
Veterans benefits and services	9	10	14	15	13	14
Administration of justice	10	10	9	5	4	4
Community and regional development	8	8	8	5	7	6
General government	0	(1/)	(1/)	3	2	3
International affairs	(1/)	0	0	12	10	10
Income security	2	1	1	3	0	0

1/ Less than $500,000

NOTE: Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities," agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 26a. Budget authority for basic research, by budget function, Fiscal years 1978-83

[In millions of constant FY 1992 dollars]

Budget function	1978	1979	1980	1981	1982	1983
Total	7,288	7,540	7,946	7,838	7,605	8,560
Health	2,478	2,898	2,967	2,994	2,800	3,391
General science	1,913	1,883	1,941	1,928	1,858	1,972
Space research and technology	819	808	812	683	622	686
National defense	636	670	930	936	998	1,080
Energy	312	316	337	338	373	438
Agriculture	392	407	414	431	423	447
Natural resources and environment	412	240	229	201	199	214
Transportation	139	138	133	137	146	160
Education, training, employment, and social services	113	108	103	101	112	96
Commerce and housing credit	18	18	25	26	24	26
Veterans benefits and services	18	18	24	23	19	19
Administration of justice	20	18	15	8	6	5
Community and regional development	16	15	13	8	10	8
General government	0	(1/)	(1/)	5	3	4
International affairs	(1/)	0	0	18	14	14
Income security	4	2	2	5	0	0

1/ Less than $500,000

NOTES: Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities," agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 26b. Budget authority for basic research, by budget function, Fiscal years 1984-89

[In millions of dollars]

Budget function	1984	1985	1986	1987	1988	1989
Total	7,072	7,810	8,193	9,021	9,553	10,648
Health	2,813	3,243	3,324	3,851	4,087	4,413
General science	1,606	1,779	1,795	1,942	2,061	2,265
Space research and technology	646	498	737	843	944	1,099
National defense	845	856	960	900	905	965
Energy	365	428	456	511	571	703
Agriculture	353	406	390	397	428	433
Natural resources and environment	192	206	204	206	210	331
Transportation	125	255	184	231	197	287
Education, training, employment, and social services	77	86	83	78	83	92
Commerce and housing credit	20	23	26	26	28	29
Veterans benefits and services	15	15	15	17	17	16
Administration of justice	5	4	5	8	8	7
Community and regional development	5	6	6	4	7	3
General government	3	4	5	4	5	3
International affairs	3	4	5	3	3	3
Income security	0	0	0	0	0	0

NOTE: Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 26b. Budget authority for basic research, by budget function, Fiscal years 1984-89

[In millions of constant FY 1992 dollars]

Budget function	1984	1985	1986	1987	1988	1989
Total	9,332	9,960	10,164	10,877	11,133	11,905
Health	3,712	4,136	4,124	4,643	4,763	4,934
General science	2,119	2,269	2,227	2,341	2,402	2,532
Space research and technology	852	635	914	1,016	1,100	1,229
National defense	1,115	1,092	1,191	1,085	1,055	1,079
Energy	482	546	566	616	665	786
Agriculture	466	518	484	479	499	484
Natural resources and environment	253	263	253	248	245	370
Transportation	165	325	228	279	230	321
Education, training, employment, and social services	102	110	103	94	97	103
Commerce and housing credit	26	29	32	31	33	32
Veterans benefits and services	20	19	19	20	20	18
Administration of justice	7	5	6	10	9	8
Community and regional development	7	8	7	5	8	3
General government	4	5	6	5	6	3
International affairs	4	5	6	4	3	3
Income security	0	0	0	0	0	0

NOTES: Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget Circular No. A-11, Exhibit 44A, "Research and Development Activities;" agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 26c. Budget authority for basic research, by budget function: Fiscal years 1990-98

[In millions of dollars]

Budget function	1990	1991	1992	1993	1994	1995	1996	preliminary 1997 1/	proposed 1998
Total	11,288	12,405	12,973	13,440	13,552	13,772	14,442	14,853	15,296
Health	4,661	5,021	5,506	5,700	5,889	6,068	6,395	6,826	7,015
General science	2,306	2,526	2,532	2,553	2,542	2,622	2,662	2,773	2,886
Space research and technology	1,389	1,479	1,499	1,588	1,796	1,614	1,685	1,557	1,517
National defense	964	1,188	1,147	1,323	1,174	1,181	1,165	1,133	1,191
Energy	761	878	921	917	921	930	1,182	1,219	1,313
Agriculture	456	486	528	553	567	565	547	545	563
Natural resources and environment	336	389	383	376	224	187	147	149	157
Transportation	242	246	266	238	220	389	456	445	429
Education, training, employment, and social services	106	115	118	121	145	153	140	139	146
Commerce and housing credit	31	39	35	34	38	35	37	39	40
Veterans benefits and services	16	16	16	16	16	16	13	14	14
Administration of justice	9	6	5	5	5	9	12	12	24
Community and regional development	3	10	11	10	9	3	0	0	0
General government	3	0	0	0	0	0	0	0	0
International affairs	4	6	6	8	6	0	2	2	1
Income security	0	0	0	0	0	0	0	0	0

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

NOTES: Data for 1990-96 are actual budget authority. Data for 1997 are preliminary estimates, and data for 1998 are proposed based on the fiscal year 1998 budget. Because of rounding, components may not add to the totals shown.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

Table 26c. Budget authority for basic research, by budget function: Fiscal years 1990-98

[In millions of constant FY 1992 dollars]

Budget function	1990	1991	1992	1993	1994	1995	1996	preliminary 1997 1/
Total	12,114	12,768	12,973	13,094	12,902	12,799	13,120	13,156
Health	5,002	5,168	5,506	5,553	5,606	5,639	5,809	6,047
General science	2,475	2,600	2,532	2,487	2,420	2,437	2,418	2,456
Space research and technology	1,491	1,522	1,499	1,547	1,710	1,500	1,531	1,379
National defense	1,035	1,223	1,147	1,289	1,118	1,098	1,058	1,004
Energy	817	904	921	893	877	864	1,073	1,080
Agriculture	489	500	528	539	540	525	497	483
Natural resources and environment	361	400	383	366	213	173	134	132
Transportation	260	253	266	232	209	362	414	394
Education, training, employment, and social services	114	118	118	118	138	142	127	123
Commerce and housing credit	33	40	35	33	36	32	34	35
Veterans benefits and services	17	16	16	15	16	15	12	12
Administration of justice	10	6	5	4	5	8	11	11
Community and regional development	3	10	11	10	8	3	0	0
General government	3	0	0	0	0	0	0	0
International affairs	4	6	6	8	6	0	2	2
Income security	0	0	0	0	0	0	0	0

1/ Adjusted to reflect rescissions enacted in Public Law 105-18.

NOTES: Data for 1990-96 are actual budget authority. Data for 1997 are preliminary estimates, and data for 1998 are proposed based on the fiscal year 1998 budget. Because of rounding, components may not add to the totals shown.
GDP implicit price deflators used to convert current dollars to constant 1992 dollars.

SOURCE: Agencies' submissions to Office of Management and Budget MAX Schedule C; agency budget justification documents; and supplemental data obtained from the agencies' budget offices.

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